REPORT

COVID-19 Susceptibility among Latin People in El Paso, TX

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Originally Published on May 22, 2020
Revised June 11, 2020

The Latin population in the United States has received relatively little attention in relation to the current pandemic despite their vulnerability to COVID-19. This is especially true in the City of El Paso, Texas, where Hispanics constitute about 81% of the population.[1] On May 28, 2020, the City recorded 1,029 cases and 22 deaths.[2] Since then, both the total number of infections and mortalities across the county have skyrocketed to a staggering 3,069 cases and 89 deaths, respectively.[3] With rising rates of infection and the resignation of the city's Public Health Director, El Paso and the surrounding region must take proactive precautions to suppress the spread of the virus and provide

assistance to vulnerable individuals. To assess the possible impact of COVID-19 in El Paso, we constructed a risk assessment about the populations that could be at higher risk. To do this, we used detailed survey data on health from a sample of 1,152 Hispanic individuals that was gathered with the support of NIH in 2011.[4,5] To understand how COVID-19 may impact the Latin residents of El Paso, we analyzed risk factors associated with the virus on their own as well as interacting with each other.

The Centers for Disease Control and Prevention (CDC) state that "older adults and people of any age who have serious underlying medical conditions" are at highest risk of severe illness or death from COVID-19.[6] This umbrella term refers to people with chronic lung diseases, severe asthma, heart conditions, severe obesity, diabetes, immunocompromising illnesses (including, but not limited to chemotherapy/radiation or organ/bone marrow transplantation, HIV/AIDS, or prolonged use of corticosteroids), liver disease, and those undergoing dialysis for chronic kidney disease.[7] The CDC Morbidity and Mortality Weekly Report released on April 17, 2020 disclosed that 89.3% of people hospitalized due to COVID-19 by March 30 had at least one of the following underlying health conditions: hypertension (49.7%), obesity (48.3%), chronic lung disease (34.6%), diabetes mellitus (28.3%), or cardiovascular disease (27.8%).[8]

Racial and Ethnic Minorities

Risk is identified not only in physiological terms but also on socioeconomic, racial, and ethnic planes. The CDC expands upon their definition of "high-risk" citizens by distinguishing racial and ethnic minorities, as well as people who are currently homeless, pregnant, and breastfeeding.[9] Latin communities across the U.S. suffer from the virus in several ways at disproportionately high rates compared to other subpopulations. According to the City of New York and the CDC, Black and Hispanic/Latino communities bear the brunt of virus-related deaths.[10,11] In a weekly report,

the CDC revealed that although 18% of the U.S. population is Black, 33% of hospitalized COVID-19 cases were among Black people.[12]

In New York, the Bureau of Communicable Disease Surveillance System reported that as of April 16, 2020, the death rates for Blacks were 92.3 per 100,000 people, and 74.3 per 100,000 for Latinos.[13] In comparison, the White and Asian death rates were 45.2 and 34.5 per 100,000 people, respectively.[14] Just two months later, the mortality and infection rates have skyrocketed. At least 5,322 Latinos have died from COVID-19, the majority of whom were ages 65 and above.[15] This is the highest amount of lab-confirmed deaths of a racial group in the region, exceeding that of the White population by almost 1,000.[16] Even so, these numbers are understood to be low estimates since the data cover only lab-confirmed cases, effectively leaving out asymptomatic and non-lab confirmed cases.

Non-Fatal Hospitalizations per 100,000 by Race/Ethnicity in New York City on **April 16**, 2020

Black	**Hispanic**	**White**	**Asian/Pacific Islander**
271.7	198.6	114.5	82.2

Source: Bureau of Communicable Disease Surveillance System, 2020

Deaths per 100,000 by Race/Ethnicity in New York City on **April 16**, 2020

Black	**Hispanic**	**White**	**Asian/Pacific Islander**
92.3	74.3	45.2	34.5

Source: Bureau of Communicable Disease Surveillance System, 2020

Deaths per 100,000 by Race/Ethnicity in New York City on **June 11**, 2020

Black	**Hispanic**	**White**	**Asian/Pacific Islander**
222.4	238.7	110.8	102.8

Source: NYCHealth, 2020

Health Disparities

As discussed lately by mainstream media, existing health disparities that act as obstacles to healing for minority communities have been exacerbated by COVID-19.[17,18] Long before the pandemic, race and ethnicity were proven to be associated with life expectancy, mortality, and burden of illness in the U.S.[19] Communities of color consistently lack the access to care, proper treatment, available resources, and provider diversity that exist in high-income and white-populated areas of the country.[20] These disparities cause and prolong poor health in minority communities and result in higher-risk individuals with multiple risk factors beyond that of old age.[21] This is echoed by some public health professionals who believe that Black and Hispanic individuals die at higher rates because of an increased likelihood of suffering from underlying health conditions and structural barriers to healthcare.[22] While gaps in care increase the vulnerability of a group of people, their existence springs from an insidious culture of inequality that has not been properly addressed in discussion of COVID-19 disparities.

Black and Hispanic communities are exposed to COVID-19 more often as a result of structural racism. State institutions that place lesser value on the lives of Black and Brown people not only turn a blind eye to healthcare disparities, but restrict minorities to riskier jobs and force them to work in dangerous conditions. Research based in Canada, Europe, and the U.S. shows that immigrants and minority communities bear higher rates of work-related accidents, illnesses, and deaths because of their over-representation in high-risk occupations.[23] Because of this, they are coming into contact with COVID-19 before other racial groups and experiencing its impacts earlier in the pandemic.

Although discussion of racial disparities is critical, it is just the tip of the iceberg. Health disparities explain *how* communities of color disproportionately suffer from poor health, but not

why state and federal institutions do not properly allocate health resources. The heart of the problem lies in systemic racism, discrimination, and state-sanctioned violence against minorities that is manifested in multiple ways. Later on in the article, we discuss other covert forms of violence against communities of color, particularly Latinos, that have arisen during the spread of COVID-19.

Altogether, despite the alarming statistics, it is too early in the pandemic to conclude that COVID-19 will disproportionately infect and kill communities of color in the long-term. Nevertheless, the available data makes it clear that minorities and the poor are among the first populations to experience significant death tolls and high rates of positive COVID-19 diagnoses. Given that communities of color face many structural inequalities, such as poverty, residential segregation, racism, and access to healthcare, they are not to blame for pre-existing or virus-related health disparities.[24]

Essential and Frontline Workers

The Hispanic community is an integral part of the U.S. labor force. In 2018, 17% of the national labor force was comprised of documented Hispanic citizens, and more than half (61%) of whom were Mexican.[25] However, this percentage does not include undocumented workers, who constitute upwards of an estimated 5.1% of the U.S. workforce.[26] This is supported by our data gathered in El Paso, which shows that 53.5% of undocumented Hispanics in 2011 were employed.

Employment by Citizenship Status among Hispanics in El Paso, TX in 2010-11

	Citizen	**Resident**	**Undocumented**	**Legal Visa**	**Total**
Unemployed	33.6%	46.5%	46.5%	19.2%	35.6%
Employed	66.4%	53.5%	53.5%	80.8%	64.4%

Source: Original data

Furthermore, the CDC (2020) reports that at least 25% of the Hispanic population in the U.S. is employed by the service industry, including hospitality, transportation/travel, delivery, food, healthcare, and education services.[27] Unfortunately, these are some of the industries that suffer the most under COVID-19 restrictions and regulations, and nonessential businesses have laid off millions of workers across the country as a result of forced closures.[28] This is particularly worrisome for undocumented immigrants because they cannot file for unemployment insurance and do not qualify for Pandemic Unemployment Assistance (PUA) that was passed in the Coronavirus Aid, Relief, and Economic Security (CARES) Act.[29] Then, some people are considered "essential" employees, including those who work in grocery stores, mail services, agriculture, city maintenance, and construction, in addition to the industries mentioned earlier, who are legally required to work despite the pandemic. Laws surrounding "essential and emergency employees" require that such employees continue working through national emergencies, including those who are immunocompromised or have pre-existing health conditions.[30] This makes it difficult for frontline workers to receive unemployment benefits if they prefer not to work because one must be fired or laid off in order to collect unemployment insurance.[31] Employees who quit during the pandemic are disqualified from unemployment claims, jeopardizing their financial stability for the sake of their health. Therefore, they are forced to engage with customers and coworkers in close quarters, as before COVID-19 regulations, and thus run a higher risk of contracting and spreading the virus.

Prison, Jail, and Juvenile Delinquent Centers

Incarcerated populations in prisons, jails, and juvenile delinquent centers are also at higher risk of severe illness related to COVID-19. The close quarters, shared spaces, and lack of comprehensive

medical care in correctional institutions create a breeding ground for the virus. The Marshall Project reports that there were at least 9,437 cases of positive COVID-19 diagnoses in state and federal prisons across the U.S. as of April 25, 2020.[32] One hundred forty people, 131 of whom were incarcerated, and seven of whom were prison employees, died as a result. [33] The deaths of prisoners rapidly increased throughout the spring months, eventually amounting to 496 dead inmates by June 4, 2020.[34] There is no testing protocol for individual states, and many have refused to release information regarding the number of prisoners who were tested. For example, the Federal Bureau of Prisons reports lower numbers compared to state correctional facilities.[35] On April 26, the Federal Bureau released information which indicated that 799 federal U.S. inmates tested positive for the virus, along with 319 staff members. Although no staff member was among the deceased, 27 inmates died from virus-related complications.[36] Furthermore, three inmates died at Fort Worth Federal Medical Center alone, and all federal prisons in Texas currently have at least one positive diagnosis within the facility.[37] The Marshall Project defines these numbers as "almost certainly an undercount."[38]

This puts racial and ethnic minorities at further risk, given the mass incarceration of communities of color. In the U.S., Hispanics are imprisoned 1.4 times higher than Whites.[39] In 2016, approximately 61% of state prisoners of New Mexico were Hispanic, although 49.1% of people living in New Mexico were Hispanic in 2018.[40] The ratio of Black and Hispanic prisoners exceeds that of incarcerated Whites across the country, but the disparities are widest in Texas and other southern states. For example, ranking second only to the Black community, 541 per 100,000 prisoners in Texas are Hispanic. [41] The state's ratio of Hispanic to White prisoners is 2:1, although Arizona has the highest total number of Hispanic prisoners in the U.S.[42] Juvenile delinquent centers that incarcerate children ages 10 to 17 share similar demographic trends with adult

correctional institutions. The Department of Justice revealed that Latino youth in the U.S. have a 65% higher chance of being detained and incarcerated than their white counterparts.[43] This deep disparity also exists in the state of Texas, where juvenile prisoners are 1.47 times more likely to be Latino than white.[44] Black, Hispanic, and other minority communities in the U.S. are currently contracting, spreading, and dying from COVID-19 at higher rates than White Americans because they are disproportionately imprisoned.

Citizenship

Citizenship status impacts peoples' access to proper healthcare and medical treatment. Our data revealed that the likelihood of being medically insured increased with the stability of U.S. citizenship status. In 2011, before the Affordable Care Act, 89.3% of undocumented Hispanics living in El Paso lacked medical insurance followed by 66% of residents. However, the Affordable Care Act does not provide coverage for all immigrants and excludes the undocumented community from nonemergency services.[45] Recipients of Deferred Action for Childhood Arrivals (DACA) have been denied both Medicaid and ACA benefits since 2012, and children of undocumented parents must be lawful residents or citizens in order to qualify for Medicaid or Children's Health Insurance Program (CHIP) services.[46] Despite the implementation of the Affordable Care Act, undocumented individuals have not experienced any major improvement in access to healthcare.

Medical Insurance by Citizenship among Hispanics in El Paso, TX in 2010-11

	Citizen	Resident	Undocumented	Legal Visa	Total
Does not have medical insurance	43.1%	66%	89.3%	40.2%	48%
Has medical insurance	56.9%	34%	10.7%	59.8%	52%

Source: Original data

Homelessness

The United States struggles to properly address homelessness. In 2019, over 500,000 people were estimated to have been homeless on any given night.[47] People experiencing homelessness are at high risk of severe illness related to COVID-19 for multiple reasons. In shelters, encampments, and other congregate housing settings that homeless individuals occupy, there are almost no isolated or private spaces.[48] People are in close proximity to one another, which makes it difficult to maintain six feet of distance that medical professionals recommend to inhibit the spread of COVID-19. The homeless are less likely to have access to masks, gloves, and other materials that prevent the spread of the virus. This also includes basic hygienic facilities and necessities, like soap, which obstructs them from practicing consistent hand washing and showering.[49] Furthermore, the Council of Economic Advisers found that just under 200,000 people sleep in unsheltered places, like cars, parks, sidewalks, and abandoned buildings.[50] Many homeless individuals also rely on public transportation and facilities, like bathrooms and water fountains. Living and interacting within public spaces increases the possibility of exposure to COVID-19, as the potential to come into contact with infected surfaces and individuals is higher.

According to our data taken in El Paso, being homeless lessens the likelihood of having medical insurance. In 2011, only approximately one-quarter (24.7%) of homeless Hispanics in El Paso were medically insured, which was not even half of the percentage of housed people with medical coverage. Homeless individuals who lack medical insurance have a decreased likelihood of being tested for COVID-19 and being properly treated for potentially fatal symptoms.

Altogether, experiencing homelessness can almost guarantee poorer health outcomes. Compared to housed individuals, people who have ever experienced homelessness are more likely to face health issues, unmet health care needs, and be subject to accelerated health erosion.[51,52] Their obstructed access to basic hygienic amenities, isolated spaces, and medical care make it immensely difficult for homeless individuals in the U.S. to protect themselves and their peers from COVID-19.

Socioeconomic Status

Of the total population of Hispanics living in El Paso, we classified 52.1% as low-income and only 7.1% as high-income. People who are both low-income and Hispanic are at heightened risk of severe illness related to COVID-19, and it is vital to analyze the risks associated with socioeconomic status, race, and pre-existing conditions. Furthermore, all homeless people, who are commonly low-income, are at a higher risk of contracting, spreading, and dying from COVID-19.[53]

Pre-Existing Conditions that Increase Risk of Severe Illness Related to COVID-19

In the analyses below, we ran health conditions with medical insurance status, socioeconomic status, taking medication, age, and homelessness using the SPSS 26 statistical package. We included data on medical insurance, socioeconomic status, and age for all conditions, but only

included medication and homelessness information when the findings were at least statistically significant at $p<0.05$ or significantly exceeding the average percentage of the sample population. The table below reflects the prevalence of health conditions and diseases in the Hispanic community of El Paso in 2011.

Disease Prevalence among Hispanics in El Paso, TX in 2010-11

Obesity	High Blood Pressure	High Cholesterol	Asthma	Diabetes	Heart Attack/Stroke	Kidney Disease	Cancer	Hepatitis or Cirrhosis	Emphysema	Tuberculosis	HIV / AIDS
26.2%	16.1%	13%	7.4%	7.3%	2.6%	2.3%	16.8%	2.2%	1.3%	0.2%	<0.1%

Source: Original data

High Blood Pressure

Of the Hispanic population surveyed in El Paso, TX, 16.1% reported high blood pressure, 59.9% of whom were low-income. High blood pressure (hypertension) has been coined the "silent killer" given the absence of symptoms that accompany it. Many people go unaware of their high blood pressure, which can lead to the development of kidney disease, cardiovascular diseases, or fatal cardiac events, such as heart attack or stroke.[54] According to our data, 23.2% of adult Hispanics living in El Paso in 2011 never had their blood pressure checked. These numbers are concerning because the contraction of COVID-19 is especially dangerous for people with hypertension. The CDC reported that, as of March 30, 49.7% of people hospitalized due to virus-related complications had hypertension.[55] Given the high number of those who had never checked their blood pressure, this analysis only accounted for Latin individuals who were aware of their blood pressure status in addition to a large subsample whose blood pressure was measured as part of the study, as we discuss elsewhere.[56]

Although high blood pressure is a cause of serious health conditions, medical coverage varied greatly among those with diagnoses. Our analysis revealed that 33.7% of Hispanics were aware of their high blood pressure, but not medically insured. Even though they were aware of their health condition, just under half of those with hypertension either chose not to enroll in medical insurance or *could* not because of cost or citizenship status. Clearly, there were, and still may be, significant obstacles to healthcare for the Latin community in El Paso.

High Cholesterol

Thirteen percent of Latin people living in El Paso, TX reported high cholesterol. Similar to high blood pressure, people are often unaware of their cholesterol levels until a serious or fatal event occurs. This analysis showed that 28.8% of those who had been diagnosed with high cholesterol did not have medical insurance at the time. More than half (52.8%) of those who had been diagnosed were low-income whereas 10.2% were high-income. Approximately one-quarter (25.1%) of cases of high cholesterol occurred in Hispanics above the age of 60. The majority of cases occurred among people between the ages of 46 and 65.

High cholesterol is a predicting factor of heart disease, hypertension, and type 2 diabetes.[57] Low-lipid cholesterols increase the growth of plaque in the arteries that flow to the brain and heart, eventually accumulating to the point where blood struggles to pass.[58] Heart attack (myocardial infarction) and stroke occur when plaque buildup has completely obstructed the blood from flowing through the arteries.[59] Both are extremely dangerous health conditions that exhibit little to no symptoms, and the lack of knowledge regarding residents' blood pressures and cholesterol statuses might render them especially susceptible to health complications or death caused by COVID-19.

Asthma

In 2011, 7.4% of Hispanics across El Paso reported asthma diagnoses. Out of this portion of the population, approximately half (51.7%) did not have medical insurance prior to the Affordable Care Act. Around 56.3% of Hispanic residents with asthma were of low socioeconomic status, and 42.1% were middle-class, and a small number of residents with asthma had a high income.[60] Only 9.6% of asthma cases occurred in Hispanics over the age of 60. The majority (53.2%) were among people ages 18-25.

When treated and closely monitored, asthma is not life-threatening. However, if someone with asthma has an asthma attack and lacks access to an inhaler or ventilator, then it can be fatal. An attack is caused by severe inflammation that constricts and narrows the air passages that lead to the lungs.[61] Communicable diseases, like the flu or an upper respiratory infection, can trigger an asthma attack.[62] It is dangerous to be unaware of the condition because those with asthma are at higher risk of complications or death after contracting a communicable illness. Although it is unknown whether COVID-19 induces asthma attacks, shortness of breath and dry cough are common symptoms of the virus that alter the flow of breath through the airways.[63] Severe symptoms and difficulty breathing might trigger an asthma attack, so medical professionals warn individuals with asthma to take caution. Nonetheless, there has been no information that distinguishes asthma attacks from common symptoms of COVID-19. Because of this, virus-related symptoms may be mistaken as a routine asthma attack and deter individuals with asthma from seeking medical attention.

Heart Attack/Stroke

Only 2.6% of Latin individuals in El Paso reported a previous heart attack or stroke in 2011, 27.4% of whom were not medically insured. An overhwelming percentage (72.8%) of those who

experienced a heart attack and/or stroke were of low socioeconomic status. Socioeconomic status was also associated with medication use. About half (50.2%) of low-income Latin individuals who experienced a heart attack and/or stroke reported being on medication at the time compared to 83.2% of middle-class Hispanics.

When examining the age groups that were most affected by these conditions in 2011, our data showed that 27.2% of heart attacks and strokes were reported by people between the ages of 60 and 80. Deaths caused by COVID-19 are highest among those over the age of 64, so Latin individuals in this age group who have suffered a heart attack or stroke have compounded risk factors that render them disproportionately vulnerable to virus-related complications.[64]

Heart attack and stroke are often caused by high cholesterol, as the low-lipid cholesterols create buildups of plaque that block proper blood flow to the heart and brain.[65] A heart attack is defined as a form of cardiovascular disease by itself, but also serves as a signifier of heart diseases like arteriosclerosis, diabetes, or coronary artery disease. [66] Further, the CDC reported that 27.8% of COVID-related hospitalizations were among people with cardiovascular disease.[67] Heart attack and stroke are both potentially fatal health events that affect an individual for the rest of their life. For example, Cione's father experienced three heart attacks before receiving a diagnosis of arteriosclerosis. He was prescribed multiple pharmaceuticals that altered his metabolism, sleep quality, mood, energy levels, and ability to eat. His diet changed drastically, and he must regulate his consumption of cholesterol-rich foods for the remainder of his life.

The physiological processes leading to stroke are similar to those that result in heart attacks, although the life-long impacts may differ greatly. Depending on the part of the brain that was depleted of blood, stroke can cause paralysis, memory loss, changes in behavior, speech issues, and/or vision impairment.[68] In extreme cases, individuals lose entirely the ability to speak or move

their body.[69] Those who are medically uninsured and have experienced one or both of these health events are at higher risk of other health complications, such as an additional heart attack or stroke, if they do not receive proper follow-up care.

Emphysema

A minority (1.3%) of the Hispanic population in El Paso had emphysema in 2011. Our data revealed that 27.4% of those who were diagnosed with emphysema were not medically insured. Furthermore, emphysema was associated with low socioeconomic status, as 54.5% of those with emphysema were low-income whereas none were high-income. 18.2% of emphysema cases occurred in people ages 60-75 and 81-85, both of which are age groups that have been classified as especially susceptible to severe illness or death related to COVID-19.[70]

Emphysema is a chronic lung disease and heightens one's susceptibility to virus-related complications.[71] Smoking tobacco is the most common cause of emphysema, but air pollution and respiratory infections can also cause or aggravate it. It is defined as a chronic obstructive pulmonary disease (COPD), and people can live with emphysema for years before symptoms develop.[72] Western medicine typically involves medications, surgery, and oxygen therapy, but it is typical for those with emphysema to forgo these costly treatments.[73,74]

Hepatitis or Cirrhosis

A total of 2.2% of the Hispanic population of El Paso either has hepatitis, cirrhosis, or both. Of those who received a diagnosis, 33.6% are not medically insured. A small percentage (11.1%) of middle-class Hispanic residents have hepatitis or cirrhosis, also 11.1% of high-income Hispanics in the survey. Then, the remaining 77.8% are considered low socioeconomic status, the highest

percentage across the illnesses in this analysis. The majority of hepatitis or cirrhosis cases were reported by people between the ages of 18 and 30, although 5.5% of cases occurred in people ages 61-65.

All hepatitis infections (A, B, C, D, and E) are inflammatory and occur in the liver, as well as cirrhosis, as cirrhosis is technically the progression of any liver disease.[75] Hepatitis B and C are the most common causes of cirrhosis, and those who are most at risk of contracting B, C, and D are injection drug users and those who practice unsafe sex.[76] While Hepatitis A is curable, B, C, D, and E are not.[77] Injection drug use and unsafe sex are risk factors also associated with the contraction of HIV, and any HIV-positive person who contracts hepatitis is at severe risk of death.[78]

Kidney Disease

Around 2.3% of the Hispanic population in El Paso, TX reported kidney disease, and 42.2% of those do not have medical insurance. Of the Hispanics diagnosed with kidney disease, 41.3% are low socioeconomic status, whereas 52.8% are of middle status. Kidney disease is an illness that does not exhibit symptoms until the occurrence of a potentially fatal event, like kidney failure. It is intimately linked with heart disease, diabetes, high blood pressure, and certain forms of cardiovascular disease that are known to cause or evolve into kidney disease.[79] Further, it is a chronic disease, meaning that the kidneys are permanently damaged and cannot properly filter blood.[80] Unless the patient immediately changes their diet and/or seeks medical treatment, their condition will worsen with time.[81] 36.4% of Hispanics in El Paso with kidney disease are above the age of 60, which adds another layer of risk in the case of a positive COVID-19 diagnosis.

Cancer

In 2012, around 16.8% of Hispanic residents of El Paso, TX, who had cancer were uninsured, one of the lowest percentages across this report. 2.3% of the population received cancer diagnoses, which is approximately equal to that of kidney disease, heart attack, or stroke. This could be that the culture surrounding cancer in the United States is serious and fearful, which encourages people to remain insured after a diagnosis. People who are nearing remission, are in remission or may have been diagnosed as a child are also among those who are likely to be insured. Approximately half of Hispanic residents diagnosed with cancer at some point in the past are of low socioeconomic status (50.1%) whereas the other half is middle-class (40.9%). The ages of people who reported cancer diagnoses at one point in their lives varied greatly. Of those with diagnoses, 8.3% were ages 18-25, 16.6% for those ages 31-35, and 8.3% for ages 46-50. Ultimately, the highest rates were reported by people between the ages of 51 and 65, who constitute 58.2% of the diagnosed population, which ebbs off to 8.3% in the 71-75 years old age group. This is significant because people ages 65 and older are considered "high risk" by the CDC for COVID-19. Hispanics at that age, or older, who also have cancer are more likely to be negatively impacted by a positive COVID-19 diagnosis.

HIV/AIDS

The percentage of those with HIV/AIDS in our data constitute about 0.00002% of all Hispanics living in El Paso, which is significantly lower than the 2019 national percentage of .34%.[82,83] However, the stigma surrounding HIV/AIDS makes people wary of getting tested and learning about prevention methods. It is estimated that 1 in 7 people living with HIV/AIDS in the United

States are unaware of their positive status.[84] Therefore, it is likely that there are other HIV/AIDS-positive Latin people living in the region.

All of the HIV/AIDS-positive Hispanic residents in the sample were not medically insured. Although the amount of HIV/AIDS-positive people in the data is small, it is nonetheless worrisome considering that HIV/AIDS killed over 37,000 people in the U.S. in 2018.[85] The year before, 53% of new known HIV cases were diagnosed in the South, 21% of which were among Hispanics/Latinos. Although numbers have gradually decreased over the past few years, the rate of new cases in Texas was 15.4 per 100,000 in 2019.[86,87] Just five years ago, the South reported the lowest number of HIV-positive people who received medical care and had a suppressed viral load from being treated with antiretroviral therapy.[88] Similarly, according to our data, half of Hispanic residents with HIV/AIDS were on medication in 2011. Whether the medication being taken was antiretroviral therapy is unknown, so it is possible that even less were being treated for HIV/AIDS. Our data taken in El Paso showed that half of HIV/AIDS-positive diagnoses were reported by people ages 18-25, whereas the other half were ages 41-45.

Because of the incredibly small number of HIV/AIDS-positive survey participants, the analysis with socioeconomic status was not statistically significant. Nonetheless, the total number of HIV/AIDS-positive Hispanic residents in El Paso was split between low and middle socioeconomic statuses. In fact, 100% of those with HIV/AIDS were homeless at the time of the survey. Given the high-risk status associated with being homeless and having a positive HIV/AIDS diagnosis, respectively, this portion of the Latin population is extremely vulnerable to health complications or death related to COVID-19.

Tuberculosis

Only 0.2% of the Hispanic community of El Paso reported having tuberculosis at one point in their life. Of this portion of the population, approximately half (49.6%) have medical insurance. 100% of the tuberculosis diagnoses were among Hispanic people of low socioeconomic status, almost all of which were on medication at the time (99.6%). Half of the tuberculosis diagnoses (49.6%) were people ages 18-25, the remainder by people ages 41-45.

The rates of tuberculosis are falling 2% each year, but it is still one of the top 10 leading causes of death worldwide.[89] 25% of the global population has the tuberculosis bacteria lying dormant in their system, so others in the Hispanic community in El Paso may have contracted the bacteria as well. Only 5-15% of these people are estimated to fall ill with tuberculosis, but those with compromised immune systems and pre-existing conditions are at high risk of developing the illness. For instance, HIV/AIDS-positive people are 19 times more likely to die from tuberculosis, which causes further concern that many HIV/AIDS-positive people lack medical insurance.[90]

Diabetes

In our 2011 survey data, about 7.3% of Hispanics in El Paso reported a diabetes diagnosis, 60.1% of those with diabetes were of low socioeconomic status, whereas only 3.3% had high incomes. More than half (65.5%) had medical insurance, but 34.5% were not insured. According to the CDC, diabetes puts one at a higher risk of severe health complications related to COVID-19. About half (49.7%) of people hospitalized with severe virus-related illness as of March 30 had a previous diabetes diagnosis.[91]

Furthermore, only 31.2% of Hispanics in El Paso with diabetes took insulin at least once in 2011. Diabetes diagnoses varied considerably according to age, and Hispanics over the age of 60 constituted 29.3% of total cases. These are significant findings that reveal the disproportionately

poor health experienced by Hispanic individuals living with chronic diseases and inform us of who might be especially vulnerable to COVID-19.

Obesity

A bit over a quarter (26.2%) of Latin people living in El Paso were considered obese, of whom 3.4% were considered severely obese with a Body Mass Index (BMI) of 40 or higher.[92] 56.8% of obese individuals were medically insured, leaving almost half of obese Hispanics without medical coverage. 58.2% of those diagnosed as obese were low-income, and over one-third (38.3%) were between the ages of 18 and 30. However, our data shows that 10.8% of obese Hispanics were ages 61 and older.

Obesity, characterized by a body mass index of (BMI) of 30 or higher, increases a person's vulnerability to severe illness related to COVID-19.[93] As of March 30, 2020, the CDC reported that 48.3% of individuals hospitalized for virus-related health complications were obese.[94]

Before COVID-19, obesity was regarded as a public health issue for the U.S. Hispanic population. In 2019, an estimated 80.4% of Hispanics living in the United States were overweight or obese.[95] According to the CDC, Hispanics are more likely to be obese than White adults.[96] These trends are concerning because obesity is associated with many health conditions, including type 2 diabetes, hypertension, stroke, coronary heart disease, sleep apnea, certain cancers, and gallbladder disease.[97] Some of these conditions, as previously discussed, increase the risk of complications from COVID-19.

Statistics on COVID-19 Deaths in El Paso

Reuters estimated a COVID-19 death count of at least 69,457 in the United States on May 5, 2020.[98] This number continues to rise and reached 92,038 on May 20, marking the United States

as the country with the highest COVID-19 death toll in the world.[99] The number of lives lost to COVID-19 exceeded that of the United Kingdom, then the country with the second highest mortality rate, by over 57,000.[100] According to available official figures, the death count on mainland China reached 4,633, which is 6.7% of COVID-19 deaths in the U.S. [101] The total estimated number of cases in the U.S. is also the highest across the globe at 1,189,198, outnumbering China by more than 1 million cases despite China's population being approximately four times larger.[102] However, the data on COVID-19 cases, hospitalizations, and deaths are far from complete because of 1-2 week lags and an increase in spread of the virus.[103] The "fourth" wave is characterized by its infiltration of mid-sized cities and towns that are less densely populated than regions like New York, New Jersey, and Los Angeles.[104] With each wave, infection and death rates are estimated to rise in smaller and loosely populated areas of the country.[105]

Texas is one of the top ten most infected states with over 32,954 cases, and an estimated 912 people have died from virus-related complications.[106] El Paso is experiencing mounting pressure as time passes, and more people are admitted to hospitals due to COVID-19. Sixty-five people were hospitalized in El Paso in the first week of May, 17 of which were dependent on ventilators for survival.[107] Local public health officials worry that El Paso will suffer from limited resources, as the county only has 285 licensed ICU hospital beds.[108] Unfortunately, the City Director of Public Health, Robert Resendes, resigned on May 4, and his replacement has not been selected. The city insists that his resignation will not negatively impact preventative action since the Office of Emergency Management handles the public health crisis, but the community is buzzing with concern.[109]

Ciudad Juarez, which sits right next to El Paso on the Mexican side of the border, is also grappling with an upward trajectory of COVID-19 cases and reported a total of 1,047 confirmed

infections on May 28.[110] Nonetheless, the daily number of new cases in the U.S. is diminishing as the fourth wave of the pandemic comes to a close.[111]

Conclusion

The Hispanic community across the United States is already at higher risk of COVID-19 because of institutional discrimination across the sectors of employment, housing, and health. In El Paso, where more than half of Hispanics are of low socioeconomic status (52.1%) and 48% lack medical insurance, their chances of suffering from severe illness related to COVID-19 are even higher. This is particularly dangerous for Hispanics living in El Paso who have pre-existing health conditions, like diabetes, cardiovascular disease, HIV/AIDS, and cancer. It remains unclear whether more Hispanics living in the U.S. will die from COVID-19 than other racial and ethnic groups, as the pandemic is projected to make a return in early autumn. However, preventive measures must be taken in order for the Hispanic community in El Paso, including the proper allocation of health resources and financial support for low-income, homeless, undocumented, and medically uninsured individuals.

It is not a coincidence that infection and death rates of COVID-19 among Black and Hispanic populations in the U.S. are presently among the highest in the world since the beginning of the pandemic. Structural inequalities incurred by institutional racism have created, and continue to create, underlying medical conditions and enable increased exposure to the virus, which puts Black and Hispanic citizens in far more vulnerable positions regarding COVID-19 than their white counterparts. When assessing both preventative and recovery measures, policymakers and public health officials should consider pre-existing health disparities and their heightened likelihood of working essential or frontline jobs.[112,113]

We should take caution in our reporting of racial and ethnic inequities to ensure that data are contextualized within a critical understanding of structural factors that cause disproportionate COVID-19 rates among minority groups. Furthermore, we must ensure that racial minorities are not blamed for these disparities.

We will not know the disparities in mortality rates among racial, ethnic, and religious groups until a higher proportion of the overall population is tested for COVID-19 and all the data have been reviewed and analyzed. What is clear is that cities and towns with higher numbers of working-class African Americans and Latin people should be prepared to conduct extensive community-based health education and outreach through *promotoras de salud* and provide referrals to critical medical care for these populations at higher risk.

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The data was gathered as part of the project "Social Determinants of Physical and Mental Health of Migrant and Transient Populations: Health Disparities amongst Hispanics in El Paso" which was supported by Award Number P20MD00287 from the National Institute on Minority Health and Health Disparities to UTEP's Hispanic Health Disparities Research Center. The content is solely the responsibility of the authors and does not necessarily represent official views of the National Institute on Minority Health and Health Disparities or the National Institutes of Health.

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